Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Per.: \_\_\_\_\_\_\_\_

**Similarity Project**

You are going to create a design based on similar figures. You will create these similar figures by using a similarity transformation: **dilation!**

Part I: Create Design (based on **Requirements Table**)

Part II: Complete the **Dilation Information Table**

Part III: Write-Up

**Requirements Table**

|  |  |  |
| --- | --- | --- |
| **Dilation Type** | **Number Required** | **Complete?** |
| Center OTHER than the origin | at least **three** |  |
| Scale factor greater than 1 | at least **two** |  |
| Scale factor less than 1 | at least **two** |  |
| Total Number of Dilations | at least **ten** |  |

Other requirements:

1. You must include color in your design.
2. The design must be **neat**.
3. You **do not** have to draw “perspective” lines to connect your dilations to the center but you may include them if you’d like.

**DILATION INFORMATION**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Center** | **Scale Factor** | **Pre-Image Coordinates** | **Image Coordinates** |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |
| 7 |  |  |  |  |
| 8 |  |  |  |  |
| 9 |  |  |  |  |
| 10 |  |  |  |  |

If you need more rows because you have more dilations to record, you may either create your own table on a separate sheet of paper or ask Ms. Rapoport for an additional table.

**PROJECT WRITE-UP**

Answer the following questions in your write-up (on a lined piece of paper):

1. What makes two figures **similar**? How is similarity different than congruence?
2. Why is dilation called a similarity transformation?
3. How does **dilation** relate to **distance**?